

AMENDMENTS TO THE CLAIMS

Claims 1-69 (Canceled)

70. (New) A method of preparing a melt-processable thermoplastic composition, the method comprising mixing:

- (a) 50 to 99.5 wt% of a melt-processable thermoplastic polymer, and
- (b) 0.5 to 50 wt% of a particulate copolymer comprising the residues of a monomer mixture comprising at least 50 wt% of methyl methacrylate (MMA), at least 5 wt% and less than 20 wt% of a copolymerisable acrylic comonomer comprising at least one alkyl acrylate or methacrylate and at least 0.3 wt% and 1 wt% or less of a copolymerisable cross-linking monomer, said particles having a maximum dimension of 5 mm;

wherein the melt-processable thermoplastic polymer and the particulate copolymer are mixed under shear so that particles of said particulate copolymer are broken down.

71. (New) A method as claimed in claim 70, wherein said copolymerisable acrylic comonomer of said particulate copolymer comprises at least one alkyl acrylate.

72. (New) A method as claimed in claim 70, wherein said copolymerisable acrylic comonomer of said particulate copolymer comprises at least one alkyl acrylate selected from the group consisting of ethyl acrylate or butyl acrylate.

73. (New) A method as claimed in any one of claims 70 to 72, wherein said particulate copolymer comprises at least 12 wt% and less than 18 wt% of said copolymerisable acrylic comonomer.

74. (New) A method as claimed in claim 70, wherein said particles have a maximum dimension which is less than 1 mm.

75. (New) A method as claimed in claim 70, wherein at least 75% of said particles of the particulate copolymer are of such a size that they pass through a 300 .m sieve.

76. (New) A method as claimed in claim 70, wherein the weight averaged diameter of said particles of the particulate copolymer is greater than 100 .m as measured in accordance with ASTM D1921.

77. (New) A method as claimed in claim 76, wherein the weight averaged diameter of said particles of the particulate copolymer is greater than 150 .m as measured in accordance with ASTM D1921.

78. (New) A method as claimed in claim 70, wherein the weight averaged diameter of said particles of the particulate copolymer is less than 600 .m as measured in accordance with ASTM D1921.

79. (New) A method as claimed in claim 70, wherein the weight averaged diameter of said particles of the particulate copolymer is less than 250 .m as measured in accordance with ASTM D1921.

80. (New) A method as claimed in claim 70, wherein said particulate copolymer is formed from the residues of said monomer mixture comprising at least 69.9 wt% MMA.

81. (New) A method as claimed in claim 70, wherein said particulate copolymer is formed from the residues of said monomer mixture comprising less than 95 wt% MMA.

82. (New) A method as claimed in claim 70 which includes at least 1 wt% and less than 40 wt% of said particular copolymer.

83. (New) A method as claimed in claim 70, wherein at least 20 wt% of particles of said particulate copolymer are between 60 (250 .m) and 80 (177 .m) mesh.

84. (New) A method as claimed in claim 70, wherein the melt-processable thermoplastic polymer forms a matrix and is of polymethylmethacrylate homopolymer or copolymer derived from a monomer mixture comprising 60-100 wt% methyl methacrylate and 0-40 wt% of at least one other copolymerisable alkyl acrylate or methacrylate.

85. (New) A method as claimed in claim 70, wherein said melt-processable polymer and said particulate copolymer are mixed by extrusion under conditions such that particles of said particulate polymer are broken down.

86. (New) A method as claimed in claim 70, wherein the melt-processable thermoplastic polymer and the particulate copolymer are mixed under a shear rate of at least 100s^{-1} .

87. (New) A method as claimed in claim 70, wherein said melt-processable polymer and particulate polymer are not caused to chemically react during said mixing.

88. (New) A method of preparing a melt-processable thermoplastic composition the method comprising mixing:

(a) 50 to 95% of a melt-processable thermoplastic polymer comprising a polymethylmethacrylate homopolymer or copolymer derived from a monomer mixture comprising 60 to 100 wt% methyl methacrylate and 0 to 40 wt% of at least one other copolymerisable alkyl acrylate; and

(b) 3 to 15 wt% of a particulate copolymer comprising the residues of a monomer mixture comprising at least 79.9 wt% of methyl methacrylate, at least 10 wt% and less than 18 wt% of a copolymerisable C_1 to C_4 alkyl acrylate comonomer and at least 0.3 wt% to 1 wt% or less of a copolymerisable cross-linking monomer, said particles having a maximum dimension of 5 mm;

wherein the melt-processable thermoplastic polymer and the particulate copolymer are mixed under shear at a shear rate of at least 100 s^{-1} so that particles of said particulate copolymer are broken down.

89. (New) A melt-processable thermoplastic composition comprising:

(a) 50-99.5 wt% of a melt-processable thermoplastic polymer; and

(b) 0.5-50 %wt of a particulate copolymer comprising the residues of a monomer mixture comprising at least 50 wt% of methyl methacrylate

(MMA), at least 5 wt% and less than 20 wt% of a copolymerisable acrylic comonomer comprising at least one alkyl acrylate or methacrylate and at least 0.3 wt% and 1 wt% or less of a copolymerisable cross-linking monomer, wherein the weight averaged diameter of said particles of the particulate copolymer is greater than 100 μm and less than 250 μm as measured in accordance with ASTM D1921.

90. (New) A composition according to claim 89, wherein the melt-processable thermoplastic polymer forms a matrix and is of polymethylmethacrylate homopolymer or copolymer derived from a monomer mixture comprising 60-100 wt% methyl methacrylate and 0-40 wt% of at least one other copolymerisable alkyl acrylate or methacrylate.

91. (New) A composition as claimed in claim 89, wherein the weight averaged diameter of said particles of the particulate copolymer is greater than 150 μm as measured in accordance with ASTM D1921.

92. (New) A composition according to claim 89, wherein said copolymerisable acrylic comonomer is an alkyl acrylate.

93. (New) A composition as claimed in claim 92, wherein said alkyl acrylate is selected from the group consisting of ethyl acrylate or butyl acrylate.

94. (New) A composition as claimed in claim 92 or 93, wherein said alkyl acrylate is present in an amount of at least 12 wt% and less than 18 wt% of said particulate copolymer.

95. (New) A composition as claimed in claim 89, wherein said particulate copolymer is formed from residues of a monomer mixture comprising at least 79.9 wt% of methyl methacrylate.

96. (New) A composition as claimed in claim 89, wherein at least 20 wt% of particles of said particulate copolymer are between 60 (250 μm) and 80 (177 μm) mesh.

97. (New) A composition as claimed in claim 89, wherein at least 75% of said particles of the particulate copolymer are of a size so that they pass through a 300 μ m sieve.

98. (New) A method of preparing a melt-processable thermoplastic composition, the method comprising contacting:

- (a) 50-99.5 wt% of a melt-processable thermoplastic polymer, and
- (b) 0.5-50 %wt of a particulate copolymer comprising the residues of a monomer mixture comprising at least 50 wt% of methyl methacrylate (MMA), at least 5 wt% and less than 20 wt% of a copolymerisable acrylic comonomer comprising at least one alkyl acrylate or methacrylate and at least 0.3 wt% and 1 wt% or less of a copolymerisable cross-linking monomer, wherein the weight averaged diameter of said particles of the particulate copolymer is greater than 100 μ m and less than 250 μ m as measured in accordance with ASTM D1921.

99. (New) A method as claimed In claim 98, wherein at least 75 wt% of said particles of the particulate copolymer are of a size so that they pass through a 300 μ m sieve.

100. (New) A method as claimed in claim 98, wherein said melt-processable polymer and said particulate copolymer are mixed by extrusion under conditions such that particles of said particulate polymer are broken down.

101. (New) A method of forming an article which comprises shaping a melt-processable thermoplastic composition prepared according to claim 70 in order to form said article.

102. (New) A method according to claim 101, wherein said composition is extruded or co-extruded.

103. (New) A method according to claim 101, wherein said article is a building component.

104. (New) A method according to claim 101, wherein when a surface of the article formed of said thermoplastic composition is tested for impact resistance in accordance with ASTM D4226, the mean failure height is not less than 7.5 inches (19.05 cm).

105. (New) A method according to claim 101, wherein a surface of the article formed of said thermoplastic composition has a surface gloss measured at a 75° observation angle (according to ASTM D3679) In the range of 4.5 to 30 or less than 65.

106. (New) A method according to claim 101, wherein a surface of the article formed of said thermoplastic composition has a roughness (Ra) of less than 2000 angstroms.

107. (New) A method of forming an article which comprises shaping a melt-processable thermoplastic composition according to claim 89.